

## WHAT IS CLAIMED IS:

1. A device for performing anastomoses, the device comprising:

- a sheath having a proximal end and a distal end;
- 5       - at least a proximal inflatable balloon and a distal inflatable balloon secured to the sheath and spaced apart from each other along the length of the sheath; and
- 10       - an independent inflation duct for each balloon, each inflation duct having a first end connected to the associated balloon and having another end presenting a connection coupling, the inflation ducts being secured to the sheath along respective sheath-linked segments extending from the associated balloon towards the
- 15       proximal end of the sheath, at least beyond the proximal balloon,
- wherein the sheath-linked segment of the duct for inflating the proximal balloon extends along the sheath towards the proximal end of the sheath beyond the sheath-
- 20       linked segment of the duct for inflating the distal balloon.

2. A device according to claim 1, wherein each inflation duct has a free segment beyond its sheath-linked segment,

25       extending away from the sheath.

3. A device according to claim 1, wherein the proximal end of the sheath carries a hemostatic valve.

30       4. A device according to claim 1, wherein each inflation duct is fitted with a stop cock at its end presenting a connection coupling.

35       5. A device according to claim 1, including an intermediate inflatable balloon secured to the sheath between the proximal inflatable balloon and the distal inflatable balloon, together with an inflation duct for

inflating the intermediate balloon, which inflation duct has a first end connected to the intermediate balloon and has an opposite end presenting a connection coupling, said duct being secured to the sheath along a sheath-linked segment extending from the intermediate balloon towards the distal end of the sheath to at least beyond the proximal balloon; and

wherein the link segment of the duct for inflating the intermediate balloon extends along the length of the sheath beyond the link segment of the duct for inflating the distal balloon and it terminates before the distal end of the link segment of the duct for inflating the proximal balloon.

6. A device according to claim 1, wherein the diameter of the sheath lies in the range 1.8 mm to 3 mm.

7. A device according to claim 1, wherein the distance between the distal and proximal balloons lies in the range 40 mm to 80 mm.

8. A device according to claim 1, wherein the sheath includes at least one lateral orifice located between the proximal balloon and the proximal end of the sheath.